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(19) **United States**(12) **Patent Application Publication****Blanchard, III et al.**(10) **Pub. No.: US 2019/0146009 A1**(43) **Pub. Date: May 16, 2019**(54) **CURRENT MEASURING APPARATUS AND METHODS**(52) **U.S. Cl.**CPC **G01R 15/205** (2013.01)(71) Applicant: **Analog Devices Global Unlimited Company**, Hamilton (BM)

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ABSTRACT(72) Inventors: **Paul Blanchard, III**, Westford, MA (US); **Jochen Schmitt**, Biedenkopf (DE); **Yogesh Jayaraman Sharma**, Santa Clara, CA (US); **Victor L. Iseli**, Edmonds, WA (US)

Magnetic sensors may be positioned around an opening for a wire to measure the current flowing through the wire. A non-symmetric positioning of the sensors around the target measurement zone can enable an expanded measurement zone compared to conventional current measurement devices. Further, some sensors may be paired such that a hypothetical line connecting the sensors is tangential to the target measurement zone. Other sensors may be paired such that a hypothetical line between the sensors crosses the target measurement zone. The different pairs of the sensors can enable a reduction in the impact of stray field interference on the measurement of the current flowing through the wire.

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